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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/711,943	10/14/2004	Tzu-Ming Chou	22171-00026-US1	5942
30678 7590 10/10/2007 CONNOLLY BOVE LODGE & HUTZ LLP 1875 EYE STREET, N.W. SUITE 1100 WASHINGTON, DC 20036			EXAMINER PHAM, VAN T	
			ART UNIT 2627	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/711,943

Applicant(s)

CHOU ET AL.

Examiner

VAN T. PHAM

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Arguments

1. Applicant's arguments filed 8/17/2007 have been fully considered but they are not persuasive.

Applicant's asserted, "Go et al. discloses: "the recording speed is determined by measuring a tracking error quality and a focus error quality of a blank disc *before a recording operation*" (see paragraph [0012]), which is incorrect. The paragraph [0012] is a conventional method. Go Et al. discloses an apparatus changes a recording speed of an optical recording medium during a recording operation to minimized defects in recording quality by continuously checking wobble signals *during the recording operation*, and lowering or fixing the recording speed according to unstable states (see Go et al. [0016]).

Moreover, Applicant's asserted, "However, as amended claim 1 shows using a level of a focusing error signal or a level of a tracking error signal "*during recording*, " as recited in the claim, with an unstable signal source for changing the recording speed. Therefore, it is respectfully submitted that Gao et al. does not disclose the limitation of: "detecting at least one unstable signal source of the optical drive, wherein the unstable signal source is selected from a group including a level of a focusing error signal, a level of a tracking error signal and a frequency of buffer under-run occurrence during recording," as recited in claim 1", which is found in Applicant's admitted in the response that

"Go et al. discloses an apparatus for changing a recording speed of an optical recording medium by analyzing wobble signals in real time *during a recording operation*.¹ In particular, Go et al. discloses a control unit 104 includes a state detection unit 104-1, a comparison unit 104-2, a memory 104-3, a recording start/stop control unit

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104-4, and a recording speed control unit 104-5.2 Further, Go et al., as shown in the flowchart of FIG. 3 below, discloses: a method of changing a recording speed of an optical recording medium that comprises: starting an analysis of wobble signals on the optical disc in operation 300, checking an absolute time in a pregroove (ATIP) state in operation 301; determining whether a no good (NG) number is equal to or greater than a reference value in operation 302; stopping the analysis of the wobble signals in operation 303; storing time data of a recording stop zone in operation 304; seeking the recording stop zone and pausing in operation 305; lowering the recording speed in the recording stop zone in operation 306; and restarting the analysis of the wobble signals at the lowered recording speed in operation 307; determining whether the NG number is equal to or greater than the reference value in operation 308; and continuously analyzing the wobble signals in operation 309.3

1 Go et al. At ABSRACT.

2 Id. at FIG. 2; and paragraph [0034].

3 Id. at FIG. 3; and paragraph [0035].

Note: There is Go et al. not Gao et al.

Furthermore, Applicant's asserted, "as to Claim 2, the outstanding Office Action indicates that the feature is "inherently" disclosed in FIG. 3 and paragraph [0035] of Gao et al. However, it is respectfully submitted that Gao et al. does not disclose the limitations of Claim 2. That is, in accordance with the claimed invention, the step of checking whether the optical disc drive is recording is preferably performed first because the levels of the tracking error signal and the focus error signal are measured "during recording," as recited in claim 1, upon which claim 2

ultimately depends. In contrast to claim 2, as disclosed in paragraph [0012] of Gao et al., discloses that the tracking error quality and focus error quality are measured *before a recording operation*", which is incorrect. [0031] FIG. 3 is a flowchart illustrating a method of changing a recording speed of an optical recording medium during a recording operation, according to the present invention.

See, [0035] FIG. 3 shows a flowchart illustrating a method of changing a recording speed of an optical recording medium, *during a recording operation*, according to the present invention. Here, the method includes starting an analysis of wobble signals on the optical disc in operation 300, checking an absolute time in a pregroove (ATIP) state in operation 301, determining whether a no good (NG) number is equal to or greater than a reference value in operation 302, stopping the analysis of the wobble signals in operation 303, storing time data of a recording stop zone in operation 304, seeking the recording stop zone and pausing in operation 305, lowering the recording speed in the recording stop zone in operation 306, restarting the analysis of the wobble signals at the lowered recording speed in operation 307, determining whether the NG number is equal to or greater than the reference value in operation 308, and continuously analyzing the wobble signals in operation 309.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international

application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Go et al. (US 2003/0198155).

Regarding claim 1, discloses a recording method for an optical disk drive, comprising the steps of:

detecting at least one unstable signal source of the optical disk drive (see Fig. 2, element 104),

wherein the unstable signal source is selected from a group including

a level of a focusing error signal,

a level of a tracking error signal (see Fig. 2, and [0020], [0024], [0042], [0012]),

and

a frequency of buffer under-run occurrence during recording, and (see [0052])

ceasing recording if the detected value exceeds a preset threshold value (see Fig. 3, steps 301-305);

decreasing a rotation speed of the optical disk drive (see Fig. 3, step 306); and

resuming recording with the decreased rotation speed (see Fig. 3, step 307).

Regarding claim 2, discloses the recording method for an optical disk drive in accordance with claim 1, further comprising the step of detecting whether the optical disk drive is recording before the unstable signal source is detected (inherently, see Fig. 3 and [0035]).

Regarding claim 3, discloses the recording method for an optical disk drive in accordance with claim 1, further comprising the step of ensuring that the recording is ceased after the operation of stopping recording is instructed (see Fig. 3).

Regarding claim 4, discloses the recording method for an optical disk drive in accordance with claim 1, wherein ceasing recording and decreasing the rotation speed of the optical disk drive are controlled by a microprocessor (Fig. 1).

Regarding claim 5, discloses the recording apparatus for an optical disk drive, comprising:

- a driver for controlling a rotation speed of the optical disk drive (see Fig. 2);
- a servo signal generation unit for generating a level of a focusing error signal, and a level of a tracking error signal during recording (see Figs. 1-2, and [0020], [0024], [0042], [0012]);
- a microprocessor, comprising:
 - a detection mechanism for detecting an error rate of demodulating a wobble signal and a frequency of buffer under-run occurrence (see abstract, [0052]);
 - a recording termination control mechanism for ceasing recording if the output of the detection mechanism or the servo signal generation unit exceeds a preset threshold value and the recording is underway (see Fig. 3); and
 - a recording speed adjustment mechanism for setting parameters with a lower rotation speed if the output of the detection mechanism or the servo signal generation unit exceeds a preset threshold value and the recording is ceased by the recording termination control mechanism (see Fig. 3); and

a digital signal processor for converting the parameters with the lower rotation speed into a driving signal that instructs the driver to decrease the rotation speed of the optical disk drive (see Figs. 2-3).

Regarding claim 6, discloses the recording apparatus for an optical disk drive in accordance with claim 5, wherein the servo signal generation unit comprises:

a signal generator connected to an optical pickup head of the optical disk drive for generating the focusing error signal, the tracking error signal and the wobble signal; a level detector for detecting the levels of the focusing error signal and the tracking error signal; and a demodulation unit for demodulating the wobble signal (see Fig. 1).

Regarding claim 7, discloses the recording apparatus for an optical disk drive in accordance with claim 5, further comprising an encoder connected to the microprocessor (see Fig. 1).

Regarding claim 8, discloses the recording apparatus for an optical disk drive in accordance with claim 7, further comprising a buffer connected to the encoder (see Fig. 1, inherently).

Regarding claim 9, discloses the recording apparatus for an optical disk drive in accordance with claim 5, wherein if the output of the detection mechanism or the servo signal generation unit exceeds a preset value and the recording is ceased, the recording termination control mechanism remains at the ceased status (see Fig. 3).

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The cited references relate to a method of searching for a boundary position between a recorded region and an unrecorded region of a recording disk, and information recording apparatus; Disk drive apparatus capable of resuming the recording process during interruption.

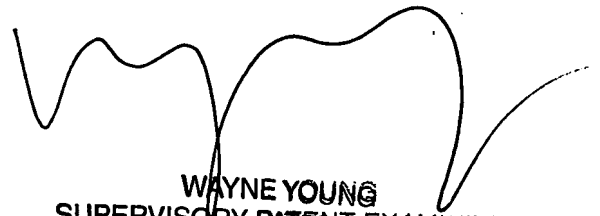
Any inquiry concerning this communication or earlier communications from the examiner should be directed to VAN T. PHAM whose telephone number is 571-272-7590. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on 571-272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

VP


WAYNE YOUNG
SUPERVISORY PATENT EXAMINER

Election/Restrictions

1. This application contains claims directed to the following patentably distinct species of the claimed invention:

The recording and reproducing device of figure(s):

- a. Species A, figure 1-2,